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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,225	09/10/2003	Jason Clay Pearson	71593	5733
7590	05/31/2007			
Mark L. Davis P.O.BOX 9293 Gray, TN 37615-9293			EXAMINER SANDERS, KRIELLION ANTIONETTE	
			ART UNIT 1714	PAPER NUMBER
			MAIL DATE 05/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/659,225

Applicant(s)

PEARSON ET AL.

Examiner

Kriellion A. Sanders

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-77 is/are pending in the application.
- 4a) Of the above claim(s) 44-52, 54-58, 60-64, 70 and 72-77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53, 59, 65-69 and 71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse on 10/24/05 of Group I, and the species comprising the diazine compound depicted in claim 59 and a hindered amine compound is again acknowledged. The restriction requirement has been maintained because the inventions of Groups I and II are unrelated, and have acquired a separate status in the art because of their recognized divergent subject matter.

The requirement is still deemed proper and is therefore made FINAL.

Claims 53, 59, 65-69 and 71 are said to read upon the elected invention. Claims 44-52, 54-58, 60-64, 70 and 72-77 are withdrawn from further consideration.

1. Applicant's arguments, see the appeal brief, filed 9/27/06 and 1/18/07, with respect to 53, 59, 65-69 and 71 have been fully considered and are persuasive. Applicant argue that the problem with the structure of Formula II of Mogami et al, is the carbon having the R5 group is a trivalent carbon, which does not exist. The "C-R5", is the only representation that is amiss. Applicants submit the "C-R5", carbon atom should be a nitrogen atom. Upon review of the original paper application filed by Mogami et al, applicant's argument is persuasive.
2. The rejection of the elected claims over Mogami et al either alone or in combination with additional references has been withdrawn.
3. However, applicant's arguments with respect to claims 53, 59, 65-69 and 71 are moot in view of the new ground(s) of rejection.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 53, 59, 65-69 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harashina et al, U. S. Patent No. 7115,677.

Harashina et al discloses a flame-retardant resin composition comprising:

10 to 300 parts by weight of a flame retardant (B) and

1 to 200 parts by weight of an inorganic glass fiber and/or glass flake filler (C),

100 parts by weight of A base resin (A).

The patented invention particularly includes a flame-retardant resin composition comprising at least one *polyester*-series resin (A)

The flame retardant (B) comprises a polyphenylene oxide-series resin and/or a polyphenylene sulfide-series resin (B1), a phosphoric ester (B2), and a nitrogen-containing cyclic compound (B3) (for example, a polyphosphate of an amino group-containing triazine compound). See col. 2, line 21 through col. 3, line 50.

The flame-retardant resin composition of the patented invention may comprise, in order to further impart flame retardancy to the composition, a second flame retardant(s) (E3), for example, a nitrogen-containing flame retardant (E3a). The (E3a) nitrogen-containing flame retardant includes a urea compound (a non-cyclic urea compound, a

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cyclic urea compound), and guanidine compound. The cyclic monoureide, may be an barbituric acid, 5,5-diethylbarbituric acid or a derivative thereof. See col. 17, line 64 through col. 18, line 5 and col. 25, line 55 through col. 26, line 34.

The amine-series antioxidant includes a hindered amine, such as 2,2,6,6-tetramethylpiperidine. The flame-retardant resin composition of the patented invention may comprise other additive(s) for any purpose. As other additive(s), there may be mentioned a stabilizer (e.g., an ultraviolet ray absorbing agent, a heat stabilizer, a weather (light)-resistant stabilizer), a lubricant, a mold-release agent (releasing agent), a coloring agent (colorant), a plasticizer, nucleating agent, an impact resistance improver (impact modifier), a slip- friction/wear) improving agent, a filler (e.g., an organic fiber having a high melting point, such an aliphatic or aromatic polyamide, an aromatic *polyester*, a fluorocarbon resin, and an acrylic resin such as a polyacrylonitrile), and others. Weather (light)-resistant stabilizers are conventionally hindered amine compounds. The additives of the patented invention are employed in a conventional manner. Therefor, the ordinary practitioner in this art would have been well apprised of the appropriate amounts of these additives to use, particularly in relation to the amounts suggested for the other components of the invention. See col. 31, lines 50-67.

The patented invention may include metal oxide includes, for example, molybdenum oxide, tungstic oxide, titanium oxide, zirconium oxide, tin oxide, copperoxide, zincoxide, aluminumoxide, nickel oxide, *iron oxide*, manganese oxide, antimony trioxide, antimony tetraoxide, antimony pentaoxide, and others. See col. 24, lines 35-41.

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Each of the components of the presently claimed invention are disclosed by Harashina et al. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to combine any of the suggested components of the patented disclosure into the patented formulations with the expectation of achieving highly flame-retardant polyester compositions. Applicant's elected species of hindered amine additive and barbituric acid is clearly set forth by the reference. Barbituric acid is clearly disclosed as a suitable flame retarding additive. Because it is structurally analogous to the barbituric acid of applicant's claims, it is expected that the barbituric acid of the patented invention would possess equivalent properties, absent a clear showing of unexpected results attributable to some structural or processing characteristic of the barbituric acid component.

The incorporation of a conventional "post consumer recycled material" as opposed to a virgin material to reduce production costs would have been an obvious variation to the art-skilled at the time of this invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Kriellion A. Sanders
Primary Examiner
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